

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 21101.0051P1	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2004/040726	International filing date (day/month/year) 06/12/2004	(Earliest) Priority Date (day/month/year) 04/12/2003
Applicant  UNIVERSITY OF UTAH RESEARCH FOUNDATION		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).



- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.



2. Certain claims were found unsearchable (See Box II).



3. Unity of invention is lacking (see Box III).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.



- b. none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2004/040726

## Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Described herein are compounds such as macromolecules that have been modified in order to facilitate crosslinking by introduction of at least one hydrazide-reactive group and/or aminooxy-reactive group, and methods of making and using thereof for scar-free wound healing, for delivering bioactive agents or living cells, for preventing adhesion after a surgical procedure or for bone and cartilage repair. The macromolecule can be an oligonucleotide, a nucleic acid, a polypeptide, a lipid, a glycoprotein, a glycolipid, a polysaccharide, a protein or a synthetic polymer, preferably a glycosaminoglycan like hyaluronan.

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C08B37/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C08B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2004/037164 A (UNIVERSITY OF UTAH RESEARCH FOUNDATION; PRESTWICH, GLENN, D; SHU, XIAO) 6 May 2004 (2004-05-06) claims 1-107	1-223
X	US 5 874 417 A (PRESTWICH ET AL) 23 February 1999 (1999-02-23) claims 1-30 examples	1-223
X	US 6 630 457 B1 (AESCHLIMANN DANIEL ET AL) 7 October 2003 (2003-10-07) column 5, lines 31-65 column 13, lines 1-10 examples	1-223
A	US 5 880 270 A (BERNINGER ET AL) 9 March 1999 (1999-03-09) claims 1-36	1-223

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents.

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

8 March 2005

Date of mailing of the international search report

31/03/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Gerber, M

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/040726

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004037164	A	06-05-2004	WO 2004037164 A2	06-05-2004
US 5874417	A	23-02-1999	US 5616568 A	01-04-1997
			AU 1260295 A	19-06-1995
			WO 9515168 A1	08-06-1995
			US 5652347 A	29-07-1997
US 6630457	B1	07-10-2003	AT 284229 T	15-12-2004
			AU 6192299 A	10-04-2000
			CA 2344215 A1	30-03-2000
			DE 69922522 D1	13-01-2005
			WO 0016818 A1	30-03-2000
			EP 1115433 A1	18-07-2001
			US 2004072793 A1	15-04-2004
US 5880270	A	09-03-1999	WO 9640662 A2	19-12-1996